

Rush. Need 07/26

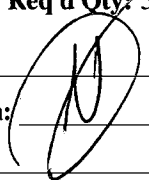
Work Order ID 164593

164593

Page 1

Monday, July 24, 2017 12:52:06 PM

Item ID: D5101-047 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: Crossbolt Spacer Assembly
Start Date: 7/25/2017 Start Qty: 5.00 *5* Cust Item ID:
Required Date: 7/26/2017 Req'd Qty: 5.00 *5* Customer:
Reference:

Approvals: Process Plan:  Date: JUL 24 2017 Tooling: Date: Run Start *NR1*
QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D5101	C

100	BAND SAW	0.00				5	0	S.C. 19/07/24
100								
Bandsaw	Memo	0.50						
Jeaspa Bandsaw	Cut blank 2.200" long							

110	HAAS CNC VERTICAL MACHINING #1	0.61				5	0	DAS 08 9-09
110								
HAAS 5AXIS	Memo	6.24						
HAAS CNC vertical machine #5	1- Mill as per Folio FB426 DWG Rev: C FOLIO REV: AA 2-Deburr per dwg							

D. 17-07-26

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER :						
Misidentified ☐	☐	Past Due ☐							

Work Order ID 164593

Monday, July 24, 2017 12:52:06 PM

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Page 2

Item ID: D5101-047

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Crossbolt Spacer Assembly

Start Date: 7/25/2017 Start Qty: 5.00

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Cust Item ID:

Required Date: 7/26/2017 Req'd Qty: 5.00

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC2- Inspect parts off machine FAI/FAIB	0.00	B.a 17-07-26			5	0		DAS 08 9-89
120									
QC	Memo	0.10							
Quality Control									
130	QC8- Inspect parts - second check	0.00				5	0		DAS 14 9-89
130									
QC	Memo	0.10							17/08/01
Quality Control									
140	Small Fab	0.00				5			DAS 19 9-89
140									
Small Fab	Memo	0.79							MLL
Small Fab	INSTALL HELICOIL AS PER DWG.								17-8-1

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Work Order ID 164593

Monday, July 24, 2017 12:52:06 PM

164593

Page 3

Item ID: D5101-047

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Crossbolt Spacer Assembly

Start Date: 7/25/2017 Start Qty: 5.00

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Cust Item ID:

Required Date: 7/26/2017 Req'd Qty: 5.00

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	QC5- Inspect part completeness to step on W/O	0.00							
170									
QC	Memo	0.10				5			DAS 38 9-89
Quality Control									AUG 01 2017
180	Identify as per dwg & Stock Location: <i>EP001</i>	0.00							
180									
Packaging	Memo	0.10				5			DAS 6 7-89
Packaging									AUG 02 2017
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.50							17/8/2017
Quality Control									

 AUG 02 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Picklist Print

Monday, July 24, 2017 12:52:22 PM

Work Order ID: 164593

164593

Parent Item: D5101-047

D5101-047

Parent Item Name: Crossbolt Spacer Assembly

Start Date: 7/25/2017

Required Date: 7/26/2017

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP Rev.A New issue JFS 15/09/29 Verified by: DD
15.12.10 AS PER DWG REV B DD VERF:JLM

IPP REV:B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

MS21209F7-10

Purchased

No

140

Each

106.0000

4

20

MS21209F7-10

Heli-Coil, Locking

**

MLC
17-8-1

Location

Loc Qty

Loc Code

GA

106

m133938

8-4

m137321

98

MDEL RINB1.000X04.0

Purchased

No

100

f

18.1300

0.184

0.968421

00

MDFI RINB1 000X04 000

Delrin Bar

**

S S 17/07/24
5.4

Location

Loc Qty

Loc Code

MAT011

18.13

m136805

18.13

0.97

ASST
T-2000
S-2000

DQA: _____ Date: _____



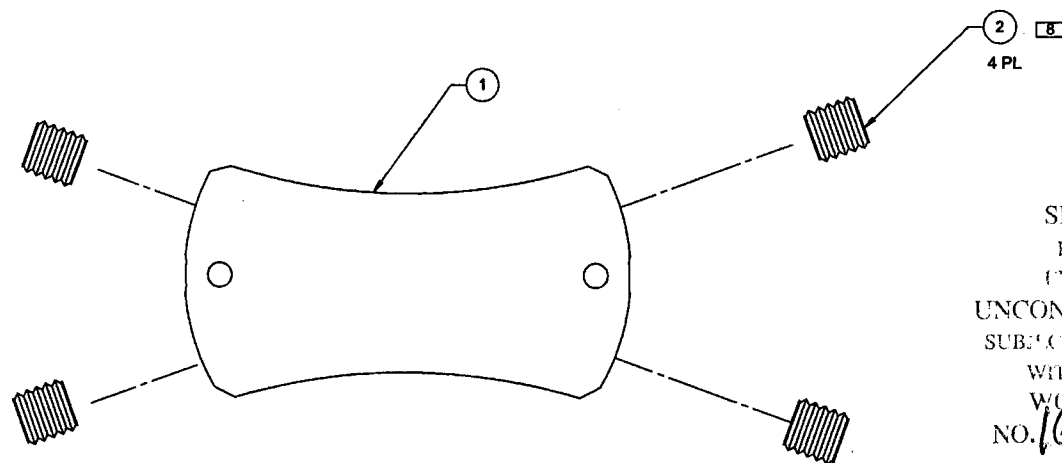
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

ITEM	QTY	P/N	DESCRIPTION
	X	D5101-047	CROSSBOLT SPACER ASSY
1	1	D5101-7	CROSSBOLT SPACER
2	4	MS21209F7-10	HELICOIL, LOCKING



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 164593

JUL 24 2017

D5101-047 CROSSBOLT SPACER ASSY

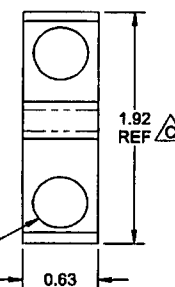
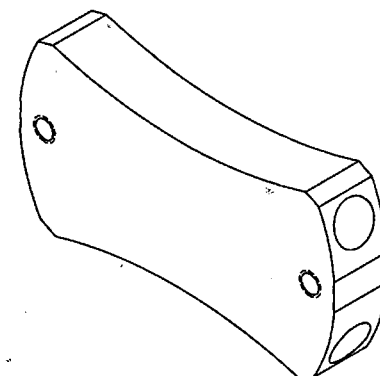
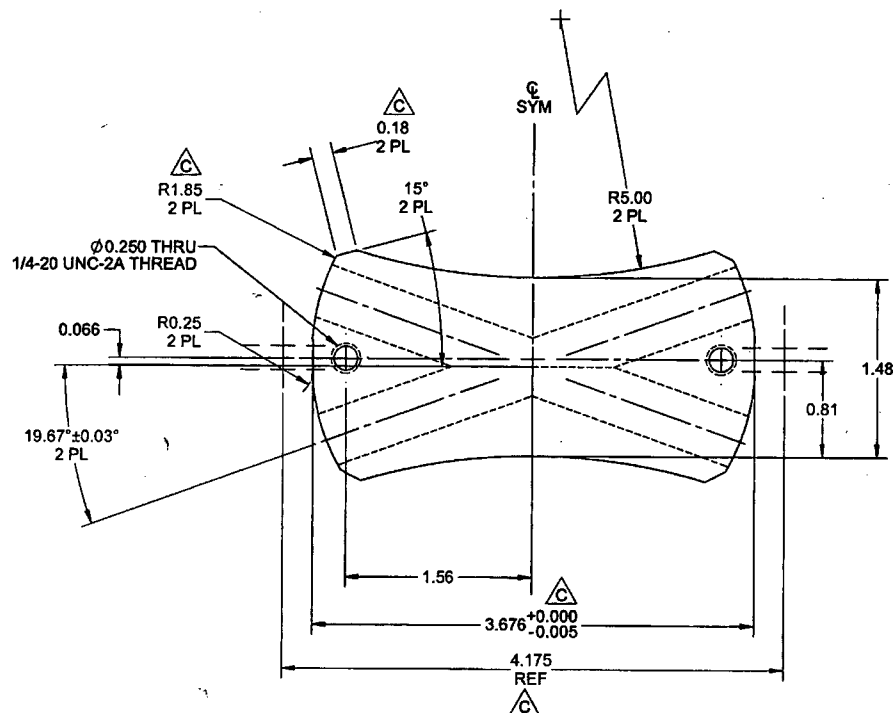
NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.7
- 7) WEIGHT: 0.15 lbs
- 8) INSTALL MS21209F7-10 HELICOIL ONE FULL REVOLUTION BELOW ADJACENT SURFACE

RELEASED
2016-11-01

APPROVED

DESIGN	AK	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	AJS		
CHECKED	WM	DRAWING NO.	REV. C
MFG. APPR.	JLM	D5101	SHEET 5 OF 8
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	CROSSBOLT SPACER	NTS
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D5101-7 CROSSBOLT SPACER

NOTES:

- 1) MATERIAL: DELRIN II 150E OR ACETRON GP ACETAL
REF DART SPEC M-DELRIN-B
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.13 lbs
- 8) FOR ALL NON-DIMENSIONED FEATURES, REFER TO CAD FILE D5101-7C.STEP

RELEASED
2016-11-01

APPROVED

DESIGN	AK	DART AEROSPACE USA, INC.	
DRAWN	AJS	EUGENE, OR	
CHECKED	WM	DRAWING NO.	REV. C
MFG. APPR.	JLM	D5101	SHEET 6 OF 6
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	CROSSBOLT SPACER	NTS
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DART AEROSPACE LTD		Work Order:	164593
Description: CROSSBOLT SPACER		Part Number:	D5101-7
Inspection Dwg: D5101 Rev: C			Page 1 of 1

INSPECTION SHEET

[illegible]

Measured by:	<i>Dr</i>	DAS 08	Checked by:	14 9-89	QC Inspector:	
Date:	14-07-26	9-89	Date:	12/08/01	Date:	

Engineering Approval: (If necessary)		Date:
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Rev	Date	Change	Revised by	Approved
B	14.07.31	New Issue	KJ	